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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,771	06/01/2001	Takaya Sato	8292.029	1304

7590

07/08/2003

APEX JURIS PLLC
13194 EDGEWATER LANE NORTHEAST
SEATTLE, WA 98125

EXAMINER

CANTELMO, GREGG

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 07/08/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/870,771

Applicant(s)

SATO ET AL.

Examiner

Gregg Cantelmo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 78 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892).
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948).
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152).
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 5 and 6 in Paper No. 8 is acknowledged.
2. Claims 1-8 are pending with claims 7 and 8 withdrawn pertaining to the nonelected species.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

4. No IDS appears to have been filed with the application prior to this office action.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by the admitted prior art in the instant application.

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The admitted prior art disclosed on page 1 of the instant application teaches of a method of manufacturing an electrode structure comprising an electrode material, binder and solvent onto a current collecting member and directing warm breeze onto the compound mixture to gradually vaporize the solvent and form an electrode film on the current collecting member. Claim 1 does not define the temperature or rate of the warm breeze. The prior art teaches of using hot air at 80-200° C. 80° being a specific data point denoting a warm air temperature. The speed of the air pulse has a low end of 15 m/sec. While the specification states that the breeze is preferably in a range from 0.1-3 m/second (last to lines of page 5) the term breeze is not exclusive to that range and can in fact be values above 3 m/sec and still be a breeze. Therefore claim 1 is still broad enough to read on the admitted prior art recited on page 1 of the instant application (as applied to claims 1 and 5).

At a temperature of 80-200° C, this range will inherently provide a dry air heat (page 1 as applied to claim 3).

The mixture contains an electrically conductive material (page 1 as applied to claim 4).

7. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by the U.S. patent No. 5,462,820 (Tanaka).

Tanaka teaches of a method of manufacturing an electrode structure comprising an electrode material, binder and solvent onto a current collecting member and directing warm breeze onto the compound mixture to gradually vaporize the solvent and form an electrode film on the current collecting member. Claim 1 does not define the

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temperature or rate of the warm breeze. The prior art teaches of using air at 20-350 °C and preferably 40° C to 200° C. The speed of the air ranges from 0.1 to 100 m/sec and preferably 1 to 30 m/sec (col. 5, ll. 1-10). While the specification states that the breeze is preferably in a range from 0.1-3 m/second (last to lines of page 5) the term breeze is not exclusive to that range and can in fact be values above 3 m/sec and still be a breeze. Therefore claim 1 is still broad enough to read on the admitted prior art recited on page 1 of the instant application (as applied to claims 1 and 5).

The air is controlled at preferable temperatures from 40-200° C and a preferable rate of 1-30 m/second. Use of the lower portions of each range is specific teachings of warm breezes (as applied to claim 2).

At a temperature of 40-200° C, and an additional teaching of drying via low-moisture air (i.e. dry air) this range will inherently provide a dry air heat (col. 1, 5, ll. 2-10 as applied to claim 3).

The mixture contains an electrically conductive material (Example 1 and col. 3, line 4 through col. 4, line 9 as applied to claim 4).

A battery with an electrode structure wherein a compound mixture comprising a powdered electrode active substance coated with ion-conducting polymer, powdered electrically-conductive substance and solvent is coated onto a current collecting member (Example 1 and col. 3, line 4 through col. 4, line 9). Warm breeze is directed onto the coating of mixed material to vaporize the solvent and form an electrode film on the current-collecting member to constitute the electrode structure (col. 5, ll. 1-10 as applied to claim 6).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (703) 305-0635. The examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan, can be reached on (703) 308-2383. FAX communications should be sent to the appropriate FAX number: (703) 872-9311 for After Final Responses only; (703) 872-9310 for all other responses. FAXES received after 4 p.m. will not be processed until the following business day. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gregg Cantelmo
Patent Examiner
Art Unit 1745

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July 2, 2003